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ABSTRACT

As the third phase of a project designed to develop a system for statewide follow-up of postsecondary vocational education, a study was conducted to develop instruments that would provide data for the employability assessment of the graduates from vocational programs. The instruments were designed to answer two questions: Are the students prepared upon graduation to enter the world of work? and In biographic terms such as age, sex, and marital status, what is the profile of students leaving postsecondary vocational education in South Dakota? The resulting instruments consisted of five questionnaires: a student exit questionnaire, first- and fifth-year student questionnaires, and first- and fifth-year employer questionnaires. Significant findings were these: Of the 887 first- and fifth-year students who returned questionnaires indicating employment, 783 were either working in the field for which they were trained, a related field, or were self-employed; less than one-half of the respondents indicated that they were advancing; students tended to rate their programs and general instructional personnel above average; and employers tended to be only slightly more critical than the graduates when evaluating the employee's preparedness for entry into the occupation. Results relating to job preparedness indicated need for identification of other variables involved. (Author/BM)

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Final Report

Project No. 498AH60014
Grant No. G007604261

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# SOUTH DAKOTA VOCATIONAL EDUCATION FOLLOW-UP

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

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Final Report

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# V.E. Follow-Up Project

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September 1977

The research reported herein was performed pursuant to Grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Occupational and Adult Education

-AUTHOR'S ABSTRACT-

This study was undertaken in an attempt to develop instruments which, when used, would provide appropriate data for the assessment of the employability of students leaving Post-Secondary Vocational Education in South Dakota. The data collection system utilized was a survey of five separate parts. These parts were: an exit, a first year student, a first year employer, a fifth year student, and a fifth year employer. Of the 887 first and fifth year students who returned questionnaires indicating that they were employed, 783 were either working in the field for which they were trained, a related field, or were self-employed. In addition, there were questions relating to "job preparedness". These questions indicated that additional study needed to be done in identifying variables other than "school" and "occupational cluster".

## INTRODUCTION

The State of South Dakota, in many respects, is not much different than other states insofar as evaluation of its Post Secondary Vocational learning environments is concerned. However, in this state, the follow-up aspect of the evaluative process has been carried out by the various Local Educational Agencies (L.E.A.'s). Within the L.E.A.'s follow-up has been done essentially when the need arises, for example if the governing board needs to know information about this program or that, a follow-up has been done. The State Board of Vocational Technical Education (referred to hereafter as the Board) has indicated a need for a common data base from which it can make decisions on allocation of funds, administrative requirements, program modifications, etc.

Over the past three years (initially a grant and two continuations of that grant) an attempt has been made to put together a system for state-wide follow-up for post-secondary vocational education in South Dakota. This document is a report of the activities of that third phase. The problems encountered in the development of the system essentially revolve around the fact that there have been three directors trying to put this system together.

The system for data collection, handling, and dissemination needs to address several aspects of post-secondary vocational education in this state. To be an effective and useful document, it must provide a common data base for the Board and it must provide answers to questions appropriate to individual L.E.A.'s. Working from this perspective, the goals of this

project were to develop an instrument that provided both the Board and the local agency with their "need-to-know" data.

Specifically, there was a need to revise existing follow-up questionnaires and methodology of data collection in an effort to stimulate rates over the previous projects. Previously, many programs experienced rather low return rates while other programs experienced high return rates.

An advisory committee for this project was appointed. This advisory committee consisted of a student personnel professional from each of the campuses involved in the survey in post-secondary Vocational Education in the State of South Dakota (these are defined as the five Area Vocational Schools) plus the University of South Dakota at Springfield and the Pierre School of Practical Nursing. This amounted to seven people serving as the advisory committee to the project director.

Over the years follow-ups have been done for numerous reasons. Unfortunately, many of them are used in a punishment and reward system. As valid a reason as many may believe this to be, it, by no means, is the only reason or what should be the reason for follow-up or any aspect of program evaluation. The primary purpose for evaluations should be to improve classroom instructions, they should, none-the-less, be carried out. The advisory committee and the director attempted to develop the system that was as non-threatening to all members within the scope of this project. From the standpoint of the advisory committee, a substantial amount of success was observed in reaching the non-threatening plateau. Only time will tell whether or not the project was successful in eliminating the perceived threat of the evaluative process. Mention has been made of the evaluative process, it must be pointed out that follow-up is not <u>the</u> evaluation of a learning environment, programs, and the things of this sort;

but rather follow-up is an aspect of evaluation. There are other aspects of the evaluative process. Some of these may be space utilization, cost-benefit types of studies, internal review, and/or external review, the point being that there are more aspects to a comprehensive evaluation than simply follow-up. Follow-up is an aspect of evaluation but certainly not the only aspect of it.

From this framework then, an attempt was made to put together a series of questions that would address the types of data which needs to be collected or in the words of the project director, the "essential data elements" necessary for the day-to-day, ongoing types of decisions that are being made in the post-secondary vocational education learning environments while keeping in mind that these data elements vary from L.E.A. to L.E.A. Needless to say, the problem is really a multi-faceted problem in that need-to-know data at one location may not necessarily be need-to-know data at another. However, by ferreting out the essential data elements on each of the campuses and simplifying the data collection process, it was hoped that "better" data could be gathered.

The project director, working with the advisory committee, developed two essential questions, these questions were referred to by the director as "criterion" questions. They are questions that can not be answered in depth off the top of ones head. They are questions that look very simple and straightforward, but upon further examination are recognized to be very complex questions. They are the questions that direct or guide the development of the questions going into the data collection instruments. The criterion questions as identified by the advisory committee are:

(A) Are the students prepared, upon leaving post-secondary vocational education in South Dakota, to enter the world of work?

(B) In biographic terms such as age, sex, marital status, ethnic background etc., what is the profile of students leaving post-secondary vocational education in South Dakota?

These questions appear to be answerable on the surface but upon further inspection, several questions start arising. For example, in the first question, what does prepared mean? Does that mean they have the technical skills? Does that mean they have the interpersonal skills? Does that mean they have the communications skills? Just what does prepared mean? This is simply an example of the complexity of these criterion questions which must be ferreted out in the process of questionnaire development. In this aspect the advisory committee was used extensively. The second question dealing with biographic terms was not as difficult to ferret out. It was a more straightforward question.

Using these two questions as the guide posts or reference points, the questionnaires were developed. They provided the perameters for this study. It was decided very early on in the project that these questions should be addressed to the person who has been out of the L.E.A. one year, the person being out of the L.E.A. five years, and the employers of these former students. The design then is a one and five year follow-up of students from post-secondary Vocational Education in South Dakota and the employers of these people. The advisory committee opted to ask the same questions of the students whether or not they were first year or fifth year people. As nearly as possible the employer questionnaire paralled the student questionnaire. Samples of these questionnaires can be reviewed in the appendix of this report.

The exiting student provides the biographic data going into a system. It was decided that these students need not respond to attitudinal types of questions because it was felt that the person needed to be on the job for a period of time to place the learning environment-world of work interface into perspective. At the time the person comes out of the learning

environment, he or she usually does not have on-the-job experiences; therefore, he or she cannot be expected to provide responses to substantive types of questions relating to the degree to which they were prepared to enter the world of work. It was the belief of the advisory committee that these types of questions should be addressed to the first and fifth year students. The exiting student provides the name, address, and other appropriate information for future follow-up endeavors. The committee felt that this was the most appropriate place to collect biographic data within the established perameters for the project.

## METHODOLOGY

As was discussed earlier in the last section of this report, the overall design for this project is a series of one and five year surveys whereby both the former students and employers of these former students are polled. The questionnaires lend themselves to a statistical or tabular form of analysis in that the questions are organized in such a way as to comment on percentages of students employed, percentages of students employed in fields for which they were trained etc. In addition, the questionnaires are designed to, hopefully, shed some light on whether or not students from one learning environment have a different probability of placement than do students from another. If, however, a difference is observed, this project does not address the reason(s) for this differential placement. By the same token, an attempt is made to determine whether students from one occupational cluster or another have a different probability of receiving employment upon their departure from the learning environment. Once again no attempt has been made to try to identify reasons for any observed differences that may exist.

The advisory committee felt that it was advantageous to try to maintain brevity within the questionnaire and the director did not argue with that point at all; however, there existed a need for very substantial pieces of data which tended to elongate the questionnaire, longer than first had been anticipated. The format, therefore, of reduced print size on heavy paper stock was selected and these were then trimmed to a size that would fit into a number nine envelope. The reason for this size was that the envelope delivering the questionnaire to the student was a number ten; the number nine fits nicely inside of that, and the questionnaire inside of the number nine. The number nine envelope provided a wrapper, and

a prepaid or business reply, pre-addressed envelope for the student to use in returning the questionnaire to the project's central office. This system as it has evolved, provided for the exiting student to furnish the name, address, program data, etc. In that respect, the exiting students from the previous year's survey become the first year students for the succeeding year's survey. Because the system has not been of on line for the necessary period of time, it is very important that the L.E.A.'s provide the names and last known or home addresses for the fifth year students. Working from these lists of students, mailing labels were generated from the computerized data gathered previously. After a period of approximately four weeks, a second mailing was made to the one-respondents. Of those who did respond, the project staff collected names and addresses of employers and sent the appropriate questionnaire to these parties. In some cases some difficulty was observed as a result of various policies and procedures within various organizations. Some people felt that they could not release the type of data for which they were asked; others felt they could. The questions asked of the employer may be reviewed in detail within the appendix of this report. Some employers felt that they could not adequately respond to the degree to which students were prepared by school "XYZ". The project director felt that in these cases communication had not been as clear as he may have thought they were.

All of the questionnaire designs, whether one and five, exit, or employer were drafted and redrafted numerous times. The advisory committee responded to each draft in various ways until finally a certain degree of concurrence was achieved. In regard to the geography of South Dakota and other factors, it was virtually impossible to have all members of the advisory committee present. Those present attempted to play the role of

of those absent and not their own special interest. This was very good. It showed a great deal of concern on the part of the advisory committee who, in fact, were able to participate with a substantial degree of regularity. The questionnaires, once drafted, were administered to a pilot group of students who were not in the appropriate sampling population. The students were asked to comment on the readability of the questionnaires, for example: Is the print too small? Do the questions follow? Is the road mapping technique as used on this questionnaire confusing or do you understand the directions? These were the types of questions that were asked in this pilot testing. Wherever difficulties arose, attempts were made by the project staff to rectify the confusing points.

At this time some discussion needs to be given to the research questions pertaining to the differential employment questions. These are broken down into three questions. Each of the first three questions have two parts: Part A and Part B. Part A deals with the unclustered programs and Part B deals with clustered occupational programs. The fourth questions deals with the perceptions between job preparedness of former students and their employers. They are as follows:

1 A: Does there exist a significant difference within the "employment" variable of course, school, and program?

1 B: Does there exist a significant difference within the "employment" variable across school and clustered program?

Question 1, therefore, deals with the degree to which students from one institution have a different placement rate than do students from another. By the same token, the clustered aspect of Part B of the question deals with general clustering of occupations as opposed to specific programs.

2 A: Does there exist a significant difference within the in-field variable across school and program?

The in-field variable pertains to whether or not the former students are

employed in the field for which they were trained for which they went to school.

2 B: Does there exist a significant difference within the in-field variable across school and clustered program?

Once again an attempt is being made to determine whether or not students coming from one school or one cluster of programs within one school have a greater probability of receiving placement in their field of study than do students from another cluster or program.

3 A: Does there exist a significant difference within the related variable across school and program?

3 B: Does there exist a significant difference within the related variable across school and clustered program?

The related variable pertains to whether or not the student is working in a field related to the one for which he or she was trained. The determination to relatedness was left strictly to the student. It was a judgment on the part of the student. No attempt was made by the project staff or any other component to try to determine whether or not the student was in the field or a related field. The student's perceptions of whether or not he or she were working in the field or in a related field was left the way the student put it.

As a result of the nature of the employment, the in-field and related variables, it is impossible to use an interval type of statistical analysis for determining these six research questions. For this reason the data were dummy coded so that a multiple regression procedure could be employed. The statistical package used in the analysis of this entire project was the SPSS or often referred to as version 6. The 0.05 alpha level was selected in an attempt to strike a happy medium between the probability of committing a type one or a type two error in the analysis of the data.

The fourth major research question is one that may people would consider

nice-to-know type of data; however, the project director felt that to interpret the data accurately, especially when the employer's evaluation of the student's preparedness and the student's evaluation of their own preparedness were both being used, it would be appropriate to test the degree to which these perceptions tend to coincide with each other. The question therefore reads as follows:

> 4: Does there exist a significant difference between the student's perceptions of job preparedness and the employer's perceptions of the employee's job preparedness.

The statistical technique for this analysis was a simple two tailed T-test. The analysis of these four questions or seven aspects will be addressed in the results section of this report.

## RESULTS

EXIT:

The exit portion of this follow-up process was designed to, hopefully, address several needs for data. One of these needs being the delivery mechanism for future follow-up studies. Another being the biographic data necessary to profile students in post-secondary vocational education, and the third to address various outside agencies needs for data pertaining to post-secondary vocational education.

Ultimately, the advisory committee decided upon a design that used an 8 1/2" X 11" paper stock. It was decided to use N.C.R. paper that is self carbonizing and to print the exit questionnaire on this material. One copy of this questionnaire would then be forwarded to a central location for processing, the other two copies remaining in the office at the local level for inclusion into various files and reports that they need to fill out. The data were collected, essentially, by the local school administering the questionnaire, separating the completed questionnaire and mailing to the project staff the original of the questionniare. In some cases the project director administered the questionnaires; however, in the majority of cases the members of the advisory committee felt that it was not necessary for the project director to take the active role that he once took in the collection of this exiting information.

The reader of this report will note that some schools do not have the total potential respondents indicated in their population as reported. The reason for this is that there are staggered graduation or completion dates and the members of the advisory committee felt that it would be more appropriate to gather the information closer to the students completion. This presents a problem to this report because of the rather incomplete

data it yields. In some cases students were mailed the questionnaire and requested to return them. In those cases it was felt that a return rate close to 90% was realized. No exact record, however, was kept in these cases. It was decided by the advisory committee that the people who should be included within the perameters of this study were any students who registered and/or attended classes during the particular school year in question. Because the study did not fly as early in the school year as had been anticipated, some students were lost in September and October that should have been included. These points, not-with-standing, from the seven schools participating in the project, 790 responses were generated. Table I provides the reader with a breakdown by school of the number of students completing the exit questionnaire. The column entitled "relative freguency (P.C.T.)" indicates the percentage of the total that the school accounted for with its absolute frequency. For example the reader will note absolute frequency for Black Hills Area Voc. Tech. is 51. That amounts to 6.5% of the students responding to the exit questionnaire. Similarly at Mitchell Area Voc. Tech. has an absolute frequency of 280; its relative frequency is 35.4%. This means that the 280 in the absolute frequency column amounts to 35.4% of 790. The rest of table I is self explanatory.

TABLE I

| SCHOOL | CODE | ABSOLUTE FREQ. | RELATIVE FREQ. (PCT) | ADJUSTED FREQ. (PCT) | CUM FREQ. (PCT) |
|---|---|---|---|---|---|
| Black Hills Area Vo Tech | 1. | 51 | 6.5 | 6.5 | 6.5 |
| Mitchell Area Vo Tech | 2. | 280 | 35.4 | 35.4 | 41.9 |
| Southeast Area Vo Tech | 3. | 43 | 5.4 | 5.4 | 47.3 |
| Northwest Area Vo Tech | 4. | 24 | 3.0 | 3.0 | 50.4 |
| Pierre School of Prat. N. | 5. | 35 | 4.4 | 4.4 | 54.8 |
| Lake Area Vo Tech | 6. | 255 | 32.3 | 32.3 | 87.1 |
| USD/S | 7. | 102 | 12.9 | 12.9 | 100.0 |
| TOTAL | | 790 | 100.0 | 100.0 | |

Since this section of the report deals with the biographic data, it is of less importance to respond at this time to the number of students in each of the specific majors around the state than it is to talk in terms of the biographic profile of the student.

The data pertaining to specific majors and number of students in each major will be provided upon specific request. The biographic data elements which should be included in the profiling of students in post-secondary vocational education certainly ought to include such elements as the student's sex, age, ethnic background, whether or not the student is a Veteran, whethor or not the student has completed the program, their current employment status, whether or not the students are working in the field or in a related field for which they were trained, and an indication of their starting salary. Data will be reported as median data, not the mean because the medians are less sensitive to extreme responses than our means.

Of the 790 students whose questionnaires are included in this survey, 605 were male, 269 were female, there were 3 coding errors, and 12 students refused to respond to the question pertaining to sex of the student. This breaks out 65.1% identified themselves as male, 34.1% identified themselves as female, and the remaining 1.9% were either coding errors or chose not to respond.

In profiling students, certainly another appropriate category is the age of the student. The data indicate a range from 17 to 63 years of age. Because of the mechanism used for the computation of age, a person who is 77 years old or a person being born in 1900 would show as 77 years of age. It is possible that as a result of coding errors, one would observe some 77 year old people. It is unlikely that there are actually 28 people in

this sampling population that are 77 years of age. The age bracket "77" and absolute frequency of 28 is, therefore, discounted as error. Those people having a computed age of 0, of which there were four, are equally discounted as error, as are the persons reporting and age of -1 and 2 years. Therefore, 34 people have been excluded from the total of 790 for reasons of error. The effective range, therefore, is 17 through 63 inclusively. Within this range, there were 496 students indicating their ages of 19, 20, or 21 years old. This amounts to 52.8% of the total number of students responding on this exit questionnaire. The median age is 20.535 years which means that the average student, using the median as the measure of tendency, is 20.535 years of age.

The project director identified five distinct ethnic groups potentially within this population and then provided a 6th alternative entitled "other". Within this framework, there was one coding error and 21 students refused to respond out of the 790 questionnaires returned. Within this group there were 6 Black Americans, 21 Native Americans, one person identified himself or herself as a Spanish American, 735 white (caucasian), and 5 people identified themselves as being of other than the aforementioned ethnic backgrounds. This breaks out to 93% of the students responding were white, 0.8% were Black Americans, 2.7% indicated that they were Native Americans, and 0.1% indicated they were of Spanish American heritage.

The Veteran variable yielded 685 or 85.4% of the 790 potential respondents as non-Veteran. This means that 92 students or 11.6% identified themselves as Veterans and 23 or 2.9% indicated that they did not choose to respond to the question.

When asked whether or not they were completing their program of study,

589 or 74.6% indicated that they were leaving as a result of completing their program of study, 148 or 18.7% indicated that they were not completing, and 53 or 6.7% refused to respond to this question.

Of the students leaving post-secondary vocational education in South Dakota, the students were asked to indicate their employment status at the time they were leaving the learning environment. These were broken down into 7 categories which are the following:

1. I am being considered.
2. I am seeking a job.
3. Military.
4. I have obtained a full-time job.
5. I have obtained a part-time job.
6. I am not available for employment.
7. Other (explain).

Across these 7 categories of the employment status, students indicated that 425 or 53.8% of the students had found full-time employment, 176 or 22.3% indicated that they were looking for a job, 48 or 6.1% identified themselves as being considered for a job, 35 or 4.4% said that they had obtained a part-time job, another 35 or 4.4% indicated that they were not available for employment. There was one coding error, 35 students chose not to respond to the question, and 20 students cited "other" as their employment status.

The next two variables in this report deal with whether or not the person is in the field for which he or she was trained and whether or not the person is working in a related field to the one for which he or she was trained. In both cases the students' own perceptions of whether or not he or she is working in the field is what was utilized in the analysis of these data. There was no attempt to determine whether or not the person actually was seeking employment in the field for which he or she was specifically trained or whether or not they were in a related field. In the case of the related variable, the question relating to whether or not

the person was employed in a related field, 191 or 24.2% indicated that they were. Within the related variable, 564 or 71.4% of the total respondents to the questionnaire chose not to respond to this particular question. By adding those people saying, "yes, I am working in the field for which I was trained" and those people saying, "yes, I am working in a related field", one comes up with a total of 615, yet when asked earlier whether or not they were employed full-time, 425 indicated they were. This presents a bit of a problem. It is the belief of this office that there is a considerable amount of overlap in that students working in the field also answered the related question in the affirmative. This would explain, in part, the 600 plus people working either directly in or in a field related to the one for which the study was done.

What is the average starting salary of a person coming out of post-secondary vocational education in South Dakota? In this case it is apparent that a bi-modal distribution exists. It is first observed that 174 students or 22% of the respondents indicated that they were making between $2.00 and $3.00 an hour. Another 189 indicated that they were making $3.00 and $4.00 an hour or in this case 23.9%. Between these two groups of people, that being lumping the people together in the $2.00 or $4.00 an hour bracket one comes up with nearly 46% (45.9%) making between $2.00 and $4.00 an hour as a starting wage. To this question 292 or 37% of the respondents failed to provide an answer.

To summarize this portion of the exit quesionnaire, it would be safe to say that at the time the student left post-secondary education in this state, a majority had already acquired full-time jobs either in the field or in a field related to the one for which they were trained.

Black Hills Area Voc. Tech. School (Rapid City). Referring back to an earlier portion of this report, the reader is reminded that BHVT

contributed 51 respondents to this study. Within the group of Black Hills respondents, 56.9% were males and 39.2% were females. The respondents indicated that 43 out of the 51 or 81% were completing their programs of study. In terms of age, the range in ages was from 19 through 63 inclusively at Black Hills. Twenty-six or 52% of the total were less than 25 years of age. The largest single group was 19 year olds. The median age for this group was 25.167 years.

The ethnic background question as it pertained to Black Hills yielded data indicating that 88.2% or 45 out of the 51 responding students were white or caucasian, the others tallied one Spanish American, three Native Americans, and one Black American. There was one coding error in this data field. This accounted for the total of 51 students.

In terms of the question asking whether or not the students were Veterans, 12 out of 51 or 23.5% indicated, "Yes, I am a Veteran", 38 of the 51 or 74.5% indicated that they were not Veterans. The remaining student chose not to respond. The employment status variable, as it deals with Black Hills, indicates that the vast majority of these students have either obtained a full-time job or are currently seeking a job. These two areas combined equal 29.4% or 15 of the 51 students have already obtained full-time employment, while 25.5% or 13 out of the 51 students have stated that they are seeking a job. This amounts to a combined total of 56% of those responding to the questionnaire either having a full-time job or seeking a full-time job. It's entirely possible that when one reviews the data closely to find that many students may have received a part-time job and at the same time still be looking. It's possible that there is an overlap existing within this variable.

In terms of starting salary, the majority, 27 of the 51 or 52.9% of the questionnaire respondents chose not to respond to this question. Other

than that, 13 of the 51 or 25.5% stated that they were earning between $2.00 and $3.00 an hour as a starting wage.

Mitchell Area Voc. Tech. (Mitchell). Initially in this section, it was indicated that 280 out of 790 respondents to the exit questionnaire were from Mitchell Area Voc. Tech. These 280 students fell into the following categories; 55 or 19.6% were female, 221 or 78.9% were male, and the remaining students either failed to respond or an error was committed in the coding of that data. One hundred eighty-eight or 67.1% start with 2 out of every 3 students completing a questionnaire from Mitchell indicated that they were, in fact, completing the program; 20.4% or 57 students stated that they were not completing at the present time; the remaining 35 or 12.5% chose not to respond to this question. Of particular interest is the 57 non-completers. As a result of multiple exit points on several programs it is entirely possible that August completers will have identified themselves as non-completers. This point is being made only in the hope that the reader of this report understands that there may be some error in this aspect of the completion variable.

The effective range of students' age coming out of Mitchell was between the ages of 17 and 50 years old inclusively. The group between 19 and 24 years of age account for this grouping of students' age amounts to 229 out of 280 students or 81.8% fall within this age group.

The students from Mitchell can also be categorized by ethnic background of which there are 257 or 91.8% white, 11 or 3.9% Native American, 5 or 1.8% Black Americans, 2 students indicated that their ethnic background was "other", while at the same time 5 students failed to respond to the question.

The substantial majority of students responding to the questionnaire pertaining to Mitchell indicate that they were not Veterans. In fact,

86.1% or 241 of the 280 students are not Veterans, 2 students chose not to respond to the question, and 37 or 13.2% of all the students at Mitchell identified themselves as Veterans.

At the time of the students leaving, 155 or 55.4% of the 280 students completing the questionnaire indicated that they had already engaged full-time employment. This 55.4% is of significant importance because of the V.A. requirement minimum of 50% employability in their follow-up system. It indicates from this that the data collection techniques employed in this project certainly possess the potential for the satisfactory collection of data for agencies supporting post-secondary vocational education in the state.

The average starting salary for students from Mitchell is between $2.00 and $4.00 an hour, 71 students or 25.4% of the 280 students indicated that their starting salary was between $2.00 and $3.00 an hour, 72 students or 25.7% of those responding indicated that their starting salary was between $3.00 and $4.00 an hour, 42 students indicated that their starting salary was between $4.00 and $5.00 per hour, 17 students indicated that their starting salary was between $5.00 and $6.00 an hour, the remaining students were distributed over the remainder of this scale, 67 students or 23.9% chose not to respond to this question.

Southeast Area Voc. Tech. (Sioux Falls). The Southeast Area Voc. Tech. at Sioux Falls is one of the schools mentioned earlier in this section as having a graduation date sufficiently late in the school year to provide incomplete data for this survey. Sioux Falls, however, provided 43 respondents to the questionnaires. These respondents were, essentially, in the LPN program which held its graduation in late winter or early spring. As a result, there was a proportionally high number of females in this sampling of Sioux Falls students. In fact, 31 of 43 or 72.1% of the respondents

identified themselves as females, 11 or 25.6% of the 43 were males. One student chose not to respond to this particular question.

Of the 43 students involved in this sample, 38 indicated that they were completing their program of study, only 5 indicated that they were not completing. The completers amounted to 88.4% of the respondents.

The Sioux Falls students were grouped between the ages of 19 and 41 for effective ranges. There were 3 extranious respondents to the age question. One would have to attribute those 3 responses to errors, because it is very unlikely that a student is going to be 2 years of age. Between the ages of 19 and 23 inclusively, Sioux Falls had 32 of the 43 respondents; this amounts to 74.4% of those people responding to the exit survey questionnaire.

The ethnic background of these 43 students amounted to 97.7% indicating that they were white. One student or 2.3% of the sample indicated that his or her ethnic background was "other". Essentially, therefore, the Sioux Falls sample is white or caucasian. Once again the rather disproportionate amount of women in this sampling population is reflected in the Veteran category in that 36 out of 43 or 83.7% indicated that they were, in fact, not Veterans. Only 4 students or 9.3% of the effective sampling population indicated that they could be classified as Veterans, 3 students chose not to respond. Out of the 43 students, 81.4% or 35 students have already found gainful employment as a full-time employee at the time they were polled.

With regard to the in-field variable, that meaning a question pertaining to whether or not the person is employed in the field for which he or she was trained, 33 out of the 43 students or 76.7% indicated that they were working in the field for which they were trained, by the same token, 20.9% or 9 out of the 43 students indicated that they were working

in a field related to the one for which they were trained. It would be safe to assume that there is some, though it is impossible to determine to what extent, overlap between these two fields. The reason the question is even raised is that 33 and 9 equals 42 of the 43 students presumably responded but yet the "no" and "no response" seem rather large so one tents to question whether or not there is, in fact, some overlap in these two questions.

Students coming out of their programs at Sioux Falls indicate that their starting average hourly wage is between $2.00 and $4.00. In the $2.00 to $3.00 an hour bracket, 11 students or 25.6% of the sampling population by the same token 21 students or 48.8% indicated that they were earning between $3.00 to $4.00 an hour. This amounts to 74.4% of the students average hourly wage between $2.00 and $4.00 per hour.

Northwestern Area Voc. Tech. (Sturgis). The number of responses generated by Sturgis amounted to 24. These 24 students are categorized as follows: 13 female, 11 male. The 13 amounts to 54.3% of the respondents from Sturgis who are female; the 11 amounts to 45.8% male.

The question pertaining to completion, all 24 students completed their programs of study. The students ranged in age effectively from 19 through 43. The majority of students were within this framework, actually this age group accounts for 62 1/2% of the students who responded to the questionnaire from Sturgis.

For the ethnic background question, one student identified himself or herself as Native American, 22 indicated that they were white, and one chose not to respond.

The vast majority of the students, in fact 91.7% or 22 of 24 students indicated that they were not Veterans. Of the 24 students, 15 or 62.5% indicated that they had already obtained a full-time job. One indicated

part-time employment, this means that 2 out of every 3 people who responded to the questionnaire indicated that they had employment of some sort. The remaining 8 students said that they were looking for work. With regard to the in-field question, half of the students completing the questionnaire indicated that they were working directly in the field in which they were trained, 4 of the students indicated that they were working in a related field. Eighteen students chose not to respond to the related question. In terms of dollars earned or starting salary for students from Sturgis, 3 of the 24 students indicated that their average starting hourly wage was between $4.00 and $5.00 an hour. Another 3 students indicated that their average starting salary was between $2.00 and $3.00 an hour. There were 2 students working for less than minimum wage. It's entirely possible, though a specific check on this was not done, that those students working for less than minimum wage are probably part-time until they find some form of full-time employment. Eleven students or 45.8% chose not to respond to this question. This rather high incidence of no response on the salary is not totally surprising. During the pilot testing of the questionnaires, the project was told that they had no business asking questions pertaining to earning capacity or ethnic background.

Pierre School of Practical Nursing (Pierre). The Pierre School of Practical Nursing is unique with regard to this study, it is a school and a program combined. It is a school having only a single program-that being Practical Nursing. Because of the nature of this program, virtually all of the students show up within the framework of this study and all of the students are female. For comparative purposes this makes data a little bit different in that the reader can directly interpret the responses in terms of sex of the student and the single program is opposed to multiple programs in the other six learning environments. The respondents to the

exit questionnaires from the Pierre School of Practical Nursing indicated 35 students responded, 35 of the respondents were female. Twenty-three of the 35 indicated that they were not completing the program. The reason for this is pure conjecture on the part of the report author, but it's apparent that these questionnaires were administered prior to completion of their program; therefore, students would have indicated that they had not completed. The students reported their ages between the ranges of 19 and 53 inclusively, 15 or 42.9% of the students were aged 19. Eight or 22.9% were 20 year olds, 2 or 5.7% gave their age as 21 years old. So for the ages of 19, 20, and 21, 71.4% of the students categorized by age are accounted for.

In terms of ethnic background, the Pierre School of Practical Nursing had 33 students out of the 35 who were whites or 94.3%, 1 Native American, and 1 person chose not to respond.

Out of the 35 students, one indicated that she was a Veteran, the other 33 indicating they were non-Veterans, and one chose not to respond.

In terms of the employment status question, 4 students had obtained full-time jobs, 1 indicated that she was not available, 5 stated that they were currently being considered, and 24 or 68.6% stated that they were actively seeking employment. With only 4 people employed full-time, it appears rather meaningless to talk in terms of whether or not they are working in their field of study or in a related field especially when there are 11 people indicating that they were working in the field but yet only 4 people had obtained full-time employment. There is just too much discreptancy in the data to draw any meaningful conclusions from that. The same situation holds for the related question.

Of the 35 people, 4 of which have a full-time job and only 2 chose to respond to the salary question. Those people reported their average

hourly starting salary between $3.00 and $4.00 an hour.

Lake Area Voc. Tech. (Watertown). Watertown accounted for 255 of of the 790 students responding to the exit questionnaire within this survey. The students are 66.7% male, 32.5% female. Two students or 0.8% chose not to respond to the question pertaining to the sex of the respondent. The absolute frequencies of the sex variable are 170 males, 83 females, and 2 non-respondents.

On the question pertaining to whether or not the student had completed the program of study, 208 or 81.6% indicated they had, in fact, completed; 43 or 16.9% indicated they had not completed and 4 or 1.6% chose not to respond.

The age of the students for Watertown ranged effectively between 17 and 50 years of age. The reader is cautioned that there may be an error in the 17. That may or may not be a valid data entry. There were 11 students ages 77 and 0 combined those two groups should be viewed with some degree of scepticism for numerous reasons. The effective range of ages for the students within the Watertown sampling population are 17 through 50 years inclusively. The vast majority of the students were 24 years of age or less. This 19 to 24 years of age accounts for, roughly, 84.6% of the total 255 respondents.

In terms of ethnic background, students going through the Watertown programs are about 95.7% white or 244 out of 255. The other ethnic background categories were Native American which had 3 out of 255 or 1.2%; 2 students identified themselves as being from other ethnic backgrounds and 6 chose not to respond.

When asked whether or not the students at Watertown were Veterans, 217 out of 255 said "No"; this amounts to 85.1% for this school; 30 or 11.8% indicated that they were, in fact, Veterans, 8 chose not to respond.

Of the 255 students responding, 140 indicated on the employment status variable that they had gained full-time employment as of the time they filled out the questionnaire. This, as was the case with Mitchell, is very encouraging on the exit questionnaire from the standpoint of being able to document the 50% employment from the standpoint of the Veterans Affairs questionnaire. Fifteen additional students indicated that they had obtained part-time employment, 11 students said that they were not available, 23 said that they were being considered, and 52 or slightly more than 20% indicated that they were still in the process of seeking a job.

One hundred fifty-four students said that they had gained full-time employment in the field in which they were trained, while 68 students indicated that they had achieved employment in a related field. These two variables must be viewed with the same scepticism mentioned earlier in that the number of students indicated they were working in the field or a related field exceeds the number identified as having full-time employment. As a matter of fact, the "in-field" variable alone exceeds those people having indicated full-time employment. Apparently what has happened here is students who are still looking or being considered are responding to the "in-field" variable.

Those people responding to the salary question essentially fell between $2.00 and $5.00 an hour insofar as starting hourly wage is concerned, 55 people or 21.6% indicated they were working for a starting salary between $2.00 and $3.00 an hour, 60 students or 23.5% indicated they were working between $3.00 and $4.00 an hour, 23 people or 9% of the 255 in this sampling population are working between $4.00 and $5.00 an hour. This means that slightly more than 54% of the students responding are working somewhere between $2.00 and $5.00 an hour.

University of South Dakota at Springfield (Springfield). USD/S

accounted for 102 of the 790 returned questionnaires. The students were exactly 2 to 1, males outnumbering female. There were 64 male respondents to the questionnaire and 32 female respondents; these figures relate to 62.7% and 31.4% respectively. Five students chose not to respond. There was one assumed coding error in this data set.

When asked whether or not they completed their programs, 83 of the 102 students or 81.4% said they were completing. Thirteen students said they were not completing but leaving, and 6 students or 5.9% chose not to respond.

The age of the students at Springfield ranged effectively between 19 and 51 years of age, once again the majority of the students falling within their late teens and early 20's. By combining the ages of 19, 20, 21, and 22 years old, a person finds 68 of the 102 students or nearly 68% of the students falling within this category.

In terms of ethnic background, 2 students responded indicating that they were Native Americans, 92 indicated that they were white, and 8 chose not to respond to the question. These data in terms of percentage points indicate 90.2% of the people responding from Springfield were white.

The Veterans question pertaining to Springfield yielded 86.3% or 88 of the 102 indicated that they were not Veterans. Eight chose not to respond, and 6 indicated they were, in fact, Veterans.

At the time the students left USD/S and filled out the exit questionnaire, 61 or 59.8% of the students had already received full-time employment committments. Two had taken part-time jobs, 24 or 23.5% indicated that they were still seeking employment. Six students or 5.9% indicated that they were not avaiable for employment. The "in-field" and related variables for Springfield look as follows: 46 students or 45.1% indicated that they were working directly in the field for which they were trained. Seventeen

or 16.7% indicated that they were not working in their specific field of training, and 39 or 38.2% chose not to respond. In terms of the related variable, 34 or 1/3 of the students indicated that they were working in the field related to the one for which they were trained, 6 or 5.9% of the students gave a negative response, and 62 or nearly 61% of the students chose not to respond to this particular question.

Starting salaries reported by the students leaving the Springfield campus were between $2.00 and $4.00 an hour, 19 students or 18.6% indicated that their average salary was between $2.00 and $3.00 an hour, 24 students or 23.5% indicated that their starting average salary was between $3.00 and $4.00 an hour, 7 students or nearly 7% indicated their starting average salary was between $4.00 and $5.00 an hour, another 7 students indicated their average starting salary was between $5.00 and $6.00 an hour. There was one coding error; 41 students chose not to respond to this question and 3 students indicated that they were making less than $2.00 an hour.

FIRST AND FIFTH YEAR WITH EMPLOYER'S RESPONSES

In an attempt to present a summary of the data pertaining to the first and fifth year participants in this follow-up, Tables II and III have been prepared. The majority of the text will deal with an explanation of the questions that will attempt to be answered through this follow-up. The employer's responses to their appropriate questions are included. The reader will note that both first and fifth year data are included in both of these tables where school names appear. Each line for each school is divided into two parts. The upper portion contains the data from the first year students and the employers of these students. The second line addresses the fifth year data. Across the top of each table, the reader will note a list of headings for the columns. This then,

is an explanation of those column headings.

On Table II, the first column has the words "Mailed Out". Mailed out refers to the target population; the population to which the questionnaires were originally mailed. Recognizing that for numerous reasons, one is not always able to reach the entire target population. For whatever reason(s) questionnaires are not delivered to the parties, a certain portion of those questionnaires are delivered to the sender. The data in the second column, that being "returned non deliverable". By subtracting the non deliverable from those originally mailed out, one arrives at the "accessable population", the people whom the project staff had a fair indication that questionnaires were deliverable. Some question has arisen within the advisory committee as to the true accessability of that population. For example the project staff could get a rather good indication as a result of postal returns, however, no clear indication was achieved with regard to the mailing of the questionnaire to a permanent or parental address and then the former student ever receiving it from that address. The fourth column is the column indicating the numbers of questionnaires returned to the project prior to June 15, 1977. This was the last date that the data could be included into this report. By dividing the number returned by those in the accessable population, one arrives at the return rate of the project. The return rates for each school for both first and fifth year students are included in that column.

The next column contains data pertaining to whether or not the people responding saying that they were employed. These data were gathered from a gross analysis of the entire set of returned questionnaires.

As was the case with the exiting student, the analysis of the respondent, whether or not he or she is employed within his or her field of study or in a related field was as strictly to the respondent. There was

no attempt made by the project staff or any other part in determining whether or not the person is actually in the field or in a related field. The data in these columns do not necessarily add in order to give the reader a cross check. The reason for that is that the data in the in-field and related columns came from specific runs of the data with the computer sorting for specific factors. For example, the in-field data pertains only to those people who are employed, and who said they were working in their field. The reason that these types of specifications were developed was that in the coding process, the project staff observed that not in all cases did the respondent follow the directions given at the time that the questionnaire was delivered. For this reason, certain sort routines were carried out on the data within the data analysis phase of this project. Similarly, the data in the related column reflects the number of people who said they were employed who also said they were not working in a related field. The self-employed column contains only total data and is not broken out by school. The reason for this is that this had to be done by hand count of all the returned questionnaires.

The next two columns, those pertaining to salary, both "starting" and "current", contained mode type of data. This measure of central tendency was selected because of the type of data one normally reviews in examining the salary information. The data were grouped, originally, into $1 increments starting with $0 to $2 and ending with $13 or more dollars per hour. To calculate a mean on this type of grouped data leaves considerable to be desired. Equally the median is inappropriate; therefore, the mode is used. The mode sometimes presents problems in data analysis, particularly if a multi-modal distribution occurs. The meaning behind this statement is very simply that it is entirely possible that out of 25 respondents, for example, two groups both reported 10 people per group. The data should

be examined in terms of the general categories as opposed to specific dollar amounts. For this reason, where multi-modal distributions appeared, the data is recorded in a similar fashion. If two numbers appear in this column, it means that both of those categories appeared relatively equally as frequent as did the other. For example in one particular case there were approximately 25 respondents in one category and approximately 22 in another, as a result of the close proximity of these two counts both elements are reported. The reader will also note, particularly in the fifth year data, the alphabetic characters NR. In these cases the respondents failed to provide the necessary information with regard to their salaries. The "no response" category, therefore, best reflects the earnings of the former students in these data elements.

The next variable on Table II is simple labeled "advancing". The numbers in this column reflect the numbers of people answering in the affirmative to the question: "In terms of promotional opportunities, are you advancing in your current position?" No attempt was made to report the number of negative responses or non-responses. There is a difference between these two. Probably they should be here, but from the standpoint of brevity and hopefully some readability in this table, they have been omitted.

The next column addresses the label entitled "satisfied". This column of data reflects the number of people who identified themselves as being satisfied with their current employment. As was the case with the "advancing" question, the data reflects only the number of people identified as advancing in their chosen occupational area. These last two columns, "advancing" and "satisfied" are both the result of special selection characteristics within the computer. These two elements developed as a result of a selection process in which questions were asked; in which

selection of statements were developed utilizing only those people who were employed in their field and those students who said that they were not employed in their field but who said they were employed in a related field. By combining these two groups, the "advancing" and "satisified" data were generated.

The next column addresses the questions of availability for employment. Hopefully this is a reflection of those numbers of people who are, today, seeking gainful employment who do not currently hold a job but are looking for employment, hence, the question entitled, "available". The people identifying themselves here have said that they are not employed and that they are available for employment. Once again, the numbers indicate a specific count.

The last four columns in Table I depart from the type of data reported to this point. These four columns all contain mean data. Mean data is the measure of central tendency most usually referred to as the average. It is arrived at by adding the responses and dividing by the number of responses in these various fields.

The first of these last four columns is entitled "instruction" specifically, the question that generated these data reads: "Please rate on the following scale, the degree to which your classroom and laboratory instruction reflected the skills you needed for employment. Circle your answer. One means there was no relation, and seven means there was a very high relation." In the drafting of this question, the anticipation was that rather than asking for an evaluation of his/her specific instructor, the student would respond in terms of the total instruction within the particular learning environment. The data contained in the "instruction" column is the overall mean for the school or in the case of the total line for the entire project.

The next column heading is that of "clarify". The question generating

those data reads as follows:

> "Please rate the degree to which your instructors clarified the subject matter of your program. Circle your answer. One means that they did not clarify the subject matter well and seven means that they did clarify the subject matter well."

Once again mean data is reported.

The "instructors knowledge" column was generated as a result of the question:

> "Please rate your instructor's knowledge of their subject matter area. Circle your answer. One means that they were not very knowledgeable and seven means that they were very highly knowlegeable."

Once again mean data is generated.

The final column of Table II addresses the instructors interest in the student's individual development toward becoming a competent technician in a particular field of study. The question reads:

> "Please rate on the following scale, the degree to which your instructors showed interest in your progress. Circle your answer. One means they showed no interest in your progress and seven means they showed an extremely large amount of interest in your progress."

Once again the data are recorded as mean data.

The reader will note that in the reporting of these last four columns of mean data, no attempt has been made to try to identify the number of respondents going into the generation of that mean. An indication of this can be developed by looking at the number of returned questionnaires column of this table. In the event that a respondent chose not to respond to one of these questions, that non respondent would not have effected the calculation of the mean. For example, if a school had 32 respondents, 1 of the 32 people failed to respond to the question pertaining to the clarifying of the subject matter, the deviser for the development of the mean would be 31, not 32. This is the reason that the words "an indication of the number of respondents can be gained from the column entitled 'returned questionnaires'". It is only an indication, it is not an absolute.

| | Mailed out | Returned non deliverable | Accessable Population | Returned Questionnaires | Return Rate (%) | Employed | In Field of Study | Related to field of study | Self-Employed | Starting Salary | Current Salary | Advancing | Satisfied | Available For Employment | Instruction | Clarify | Instructor's Knowledge | Instructor's Interest |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 115 | 3 | 112 | 73 | 65.2 | 46 | 27 | 3 | | 3/4 | 3 | 18 | 23 | 12 | 5.09 | 5.77 | 6.41 | 5.58 |
| Black Hills | 97 | 36 | 61 | 25 | 41 | 19 | 11 | 1 | | 2/3 | NR | 6 | 11 | 0 | 4.88 | 6.00 | 6.21 | 5.96 |
| | 344 | 9 | 335 | 176 | 52.5 | 161 | 124 | 17 | | 2 | 2/3 | 99 | 122 | 6 | 5.04 | 5.38 | 5.94 | 5.44 |
| Mitchell | 394 | 58 | 336 | 132 | 39.3 | 105 | 62 | 20 | | 2 | NR | 60 | 67 | 4 | 5.40 | 5.74 | 6.06 | 5.52 |
| | 190 | 13 | 177 | 89 | 50.3 | 69 | 53 | 5 | | 3 | 3 | 36 | 53 | 8 | 5.51 | 5.67 | 6.16 | 5.61 |
| Sioux Falls | 160 | 43 | 117 | 60 | 51.3 | 43 | 30 | 4 | | NR | 3 | 23 | 28 | 4 | 5.26 | 5.74 | 6.15 | 6.00 |
| | 58 | 1 | 57 | 28 | 49.1 | 19 | 11 | 4 | | 2 | 2 | 10 | 12 | 3 | 5.35 | 6.00 | 6.67 | 6.30 |
| Sturgis | 35 | 8 | 27 | 12 | 44.4 | 6 | 1 | 1 | | NR | NR | 1 | 1 | 3 | 4.36 | 5.33 | 6.25 | 5.00 |
| | 37 | 0 | 37 | 22 | 59.5 | 18 | 18 | 0 | | 2/3 | 3 | 9 | 17 | 1 | 6.50 | 6.73 | 6.77 | 6.50 |
| Pierre | 43 | 16 | 27 | 14 | 51.9 | 5 | 5 | 0 | | NR | NR | 4 | 4 | 1 | 6.43 | 6.43 | 6.64 | 6.71 |
| | 340 | 14 | 326 | 158 | 48.5 | 127 | 88 | 16 | | 2 | 2/3 | 61 | 80 | 18 | 5.04 | 5.46 | 5.91 | 5.58 |
| Watertown | 391 | 52 | 339 | 152 | 44.8 | 117 | 55 | 23 | | NR | NR | 55 | 63 | 9 | 4.77 | 5.61 | 6.31 | 5.65 |
| | 187 | 3 | 184 | 102 | 55.4 | 79 | 48 | 17 | | 2 | 2/3 | 36 | 52 | 8 | 5.18 | 5.54 | 6.14 | 5.58 |
| Springfield | 167 | 13 | 156 | 80 | 51.3 | 73 | 40 | 18 | | 2 | NR | 40 | 50 | 4 | 4.91 | 5.39 | 5.90 | 5.42 |
| | 1271 | 43 | 1228 | 648 | 52.8 | 519 | 369 | 62 | 30 | 2/3 | 2/3 | 269 | 359 | 56 | 5.20 | 5.58 | 6.11 | 5.61 |
| TOTAL | 1287 | 216 | 1071 | 475 | 44.4 | 368 | 204 | 67 | 51 | 2 | 3 | 189 | 224 | 25 | 5.07 | 5.66 | 6.16 | 5.65 |

TABLE II

The readers attention is now directed to Table III of this section. This table is laid out in a similar format to that of Table II. That being that the division of the double lines for each school are the same. The top line is the data for the first year students, the second line is the data for fifth year students. The employer data is contained in this particular table in the column headings followed by an "(E)". The column headings followed by an "(S)" indicate the columns of student responses.

The first column in this table is entitled, "knowledge (S)" this and the next seven pertain to question number 18 on the one and five year follow-up instrument. That question reads:

> "Please rate on the following scale the degree to which you were prepared by your school for your current job. Circle only one number per line. One means you were not prepared and seven means you were hightly prepared."

This is then broken down into 8 aspects of job preparedness in which the student is asked to evaluate his/her preparedness for entry into the world of work. Those eight categories are: knowledge, quantity of skills, quality of skills, the ability to follow instructions, the ability to work with others, the willingness to improve oneself once the job has been secured, the knowledge of safety standards and safety procedures necessary to function within the work site, and a summary of communication skills. From this explanation it is hoped that the column headings are self explanatory.

The remaining columns in this table summarize the data gathered from the employer questionnaire. The advisory committee, working with the project staff in the development of these questionnaires, felt that it was appropriate to compare as closely as possible the employers perceptions with the students perceptions using exactly the same question. Consequently, the employer questionnaire reads:

"Please rate on the following scale the degree to which the above mentioned person was prepared to assume his/er current position within your organization."

The same 8 categories existed on the employer questionnaire as were developed for the student questionnaire, they are: knowledge, quantity of work produced, quality of work produced, the ability to work with others, willingness to improve, knowledge of safety practices, procedures and safety standards, and communication skills. The last two columns identified in Table III address specific questions relating to whether or not the employer is satisfied with this particular employee's performance on the job.

The final column in Table III is entitled "hire" and it reads:

"Would you hire another person from the same school and/or program if you could?"

The responses to these last two questions are both yes or no types of responses. The reader will note that the data reported in these columns are separated by a slash. The number above the slash indicates the number of affirmative responses, while the number below the slash indicates the number of negative responses.

With the exception of these last two columns, the one dealing with satisfaction and the one dealing with hiring, all of the data reported here is mean data. Just as in Table II, an indication can be gained into the number of responses, particularly in the students section of this by examining the numbers within the returned questionnaire (see Table II). The employer data has no such indicator associated with it; however, the return rate of employer questionnaires approached 80%. The employers were better at returning their questionnaires than were any of the students with the possible exception of the exiting students.

| | Knowledge (S) | Quantity of work (S) | Quality of work (S) | Follow Instructions (S) | Work With Others (S) | Willingness to improve (S) | Safety (S) | Communication Skills (S) | Knowledge (E) | Quantity (E) | Quality (E) | Follow Instructions (E) | Work With Others (E) | Willingness To Improve (E) | Safety (E) | Communication Skills (E) | Satisfied (E) | Hire (E) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4.75 | 4.48 | 5.05 | 5.50 | 5.67 | 5.98 | 5.77 | 5.44 | 4.62 | 4.92 | 5.04 | 5.62 | 5.96 | 6.00 | 5.44 | 5.23 | 26/0 | 21/2 |
| Black Hills | 4.68 | 5.09 | 5.59 | 5.73 | 5.64 | 5.96 | 5.67 | 5.14 | 4.90 | 5.80 | 5.50 | 5.40 | 5.60 | 6.00 | 5.50 | 5.40 | 11/0 | 10/0 |
| | 5.05 | 4.90 | 5.36 | 5.65 | 5.80 | 5.89 | 5.78 | 5.44 | 4.82 | 4.84 | 4.93 | 5.51 | 5.67 | 5.67 | 5.25 | 5.14 | 93/7 | 93/1 |
| Mitchell | 4.96 | 4.84 | 5.32 | 5.85 | 5.93 | 5.99 | 5.75 | 5.50 | 5.46 | 5.40 | 5.72 | 6.06 | 6.14 | 6.16 | 5.87 | 5.56 | 51/0 | 48/0 |
| | 5.35 | 5.15 | 5.55 | 5.64 | 5.89 | 5.89 | 5.84 | 5.65 | 5.19 | 5.12 | 5.43 | 5.69 | 5.77 | 5.87 | 5.47 | 5.42 | 50/2 | 48/1 |
| Sioux Falls | 5.23 | 5.14 | 5.71 | 6.11 | 6.28 | 6.26 | 6.09 | 5.93 | 5.55 | 5.18 | 5.71 | 5.73 | 5.36 | 5.55 | 5.86 | 5.41 | 21/0 | 21/0 |
| | 4.75 | 4.50 | 5.00 | 5.57 | 5.83 | 5.79 | 5.33 | 5.50 | 5.27 | 5.70 | 5.80 | 5.60 | 6.00 | 6.10 | 6.14 | 5.50 | 9/0 | 9/0 |
| Sturgis | 3.27 | 3.82 | 3.64 | 4.82 | 5.18 | 5.46 | 4.91 | 4.36 | 2.00 | 5.50 | 3.50 | 5.00 | 5.00 | 5.50 | 6.00 | 5.00 | 2/0 | 2/0 |
| | 6.38 | 6.24 | 6.55 | 6.48 | 6.62 | 6.76 | 6.76 | 6.48 | 4.93 | 5.00 | 5.07 | 5.21 | 5.00 | 5.29 | 5.29 | 4.50 | 14/0 | 14/0 |
| Pierre | 5.79 | 6.71 | 6.79 | 6.50 | 6.57 | 6.50 | 6.57 | 5.93 | 5.20 | 5.60 | 5.80 | 5.25 | 5.00 | 5.60 | 5.60 | 5.40 | 5/0 | 5/0 |
| | 4.94 | 4.92 | 5.33 | 5.70 | 5.92 | 5.91 | 6.06 | 5.44 | 4.85 | 4.53 | 5.00 | 5.32 | 5.55 | 5.67 | 5.53 | 4.94 | 73/4 | 74/2 |
| Watertown | 4.76 | 4.76 | 5.11 | 5.72 | 5.68 | 5.88 | 5.84 | 5.53 | 5.22 | 5.21 | 5.59 | 5.72 | 5.62 | 5.93 | 5.60 | 5.45 | 59/1 | 54/0 |
| | 5.04 | 4.86 | 5.32 | 5.79 | 5.91 | 6.00 | 5.34 | 5.47 | 5.07 | 5.10 | 5.48 | 5.80 | 6.02 | 6.00 | 5.80 | 5.40 | 54/4 | 56/2 |
| Springfield | 4.76 | 4.84 | 5.49 | 5.74 | 5.81 | 6.11 | 5.48 | 5.41 | 5.67 | 5.68 | 5.98 | 6.15 | 5.85 | 6.10 | 6.29 | 5.80 | 38/0 | 34/0 |
| | 5.07 | 4.92 | 5.37 | 5.70 | 5.87 | 5.95 | 5.80 | 5.51 | 4.93 | 4.89 | 5.16 | 5.54 | 5.72 | 5.78 | 5.48 | 5.17 | 319/17 | 315/8 |
| TOTAL | 4.87 | 4.90 | 5.35 | 5.81 | 5.84 | 6.01 | 5.78 | 5.52 | 5.36 | 5.44 | 5.70 | 5.87 | 5.75 | 5.97 | 5.84 | 5.54 | 187/1 | 174/1 |

TABLE III

## HYPOTHESIS

In the methodology of this report some time was taken in detailing seven research questions that the project director felt were appropriate within the perameters of this project. This then is an analysis of those questions as they relate to first and fifth year students. The reader may recall the first question dealt with whether or not there existed a significant difference within the employment variable across school and program and across school and clustered program.

Although significance was observed in many instances, the reader is cautioned against taking this significance at face value and going on. The reason that it is stated this way is that in those cases showing significance, the $R^2$ values, at a maximum, were less than 7. This meaning that within the analysis done on these data, less than 7% of the variance could be accounted for with the variables: school, program, clustered program, employment - related and in-field. For this reason, only the general statement that significance was observed has been concluded in this report. No significance was observed as a result of school, however, in several cases significance was observed as a result of program and as a result of clustered programs. Because of the low $R^2$ values, the reader needs to be wary of making substantial modifications of existing programs as a result of these data.

Finally the last question in that group of research questions dealt with whether or not there is a difference in perceptions between the students ideas of being prepared to enter the world of work and their employers ideas of being prepared.

In the case of the fifth year student, no significance was observed. The t-value carried with it a probability in excess of 20%. This means

that a greater than 20% of the time, a person would expect to see a difference as large as that observed in these two data sets simply as a result of chance.

In the case of the first year students, however, a substantial significance does exist. The differences in the means between the data examined is large enough to indicate that a difference this large would be observed less than 1% of the time. A substantial significance, therefore, exists between the perceptions of first year students and the perceptions of the employers of first year students. Particularly as these perceptions relate to the degree to which the person is prepared upon becoming employed.

## CONCLUSION

1. Upon further surface review of this project, probably the most glaring conclusion a person can make is that return rates, though well within the range normally published as national averages, could certainly use a considerable amount of improvement.
2. Less than one-half of the people responding indicated that they were advancing. This is of particular importance in Vocational Education in light of the role that job satisfaction and advancement opportunities play in the total scheme of the individual's job satisfaction.
3. Students tend to rate their programs and general instructional personnel above average.
4. Employers tend to be only slightly critical when evaluating the persons preparedness for entry into employment, than the person himself/herself rates that degree of preparedness.

## RECOMMENDATIONS

1. A comprehensive evaluation system needs to evolve in order to put the follow-up technique into its proper perspective. The instruments that

have been developed are rather straightforward and their administration has been simplified. For these reasons, the local environments should adopt those portions of the follow-up system which they feel are most useable. The Board should place the rest of the products of this project on the "back burner" until follow-up can be placed in its appropriate perspective within the framework of a comprehensive model for evaluation of Vocational Education.

2. The Board, having communicated through its Division of Vocational and Technical Education in South Dakota has rather clearly articulated the need for a common data base. This data base could be facilitated through the Board's identification of specific questions that should be asked of the students departing any post-secondary L.E.A. delivering Vocational Education and falling within its jurisdiction. This would insure the Board's receipt of the common data and at the same time maintain the advantages of a decentralized system for carrying out post-secondary follow-up.

3. Even though the regression equations showed very limited significance in the analysis of differential placement rates, additional studies should be carried out using variables other than "school" as covariates in determining the existence of an observable differential placement rate. The data did tend to indicate that programs and clustered programs make some difference. This study should look for variables to be grouped with programs or clustered programs in an attempt to find the combination having the most impact on the individuals probability of placement. This should be done, not from the punitive standpoint, but from the standpoint of improving the probability of placement within those L.E.A.'s that showed a statistically significantly lower placement rate. A change shelter should be developed so that those local environments needing help do not feel threatened as a result of being identified.

4. If a differential placement rate does exist with a more reasonable $R^2$, activities need to be identified which can rectify any deficiencies in the competitive placement of students in entry level positions within the world of work.

5. The data relating to job satisfaction and advancement opportunities needs to be further explored because of the impact these two elements have on overall worker satisfaction. Additional study relating to job satisfaction and advancement opportunities within occupations and/or clusters of occupations needs to be undertaken. The importance of these two variables within the scheme of worker alienation and problems arising from it should be sufficient grounds to more seriously study these potential problems.

6. In any future follow-up endeavors, the due date for the final report should be October 1. This recommendation is not made through any selfish motives on the part of project director, advisory committee members, or anyone else. This is made from the practical standpoint that one of the realities in dealing with post-secondary Vocational Education in this state is that various programs have different completion dates. This tends to make an all encompassing follow-up system almost impossible without the funds for a rather sophisticated automatic data processing system. Given the economic situation of this state, one would be dreaming if he/she thought these types of data processing facilities would be available in the foreseeable future. It is, at this point, impossible to include late June, July, and August graduates in the study containing the rest of the class for any particular school year. Normally a school year is defined as beginning with the fall term and ending at the beginning of the next fall term. Students graduating in June, July, or August tend to be more like those completing in January, February, or May than they do with those students completing 6 months behind them. For this reason the due date should be moved back to Oct. 1 of the succeeding year.

APPENDIX


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## SOUTH DAKOTA VOCATIONAL EDUCATION

## EXIT SURVEY

**(Post Secondary)**

hen you have completed this survey return it to: Malcolm J. Fawley, Director
South Dakota Vocational Education Follow-Up
University of South Dakota / Springfield
Springfield, S.D. 57062

Name _____
(Last) (First) (Middle)

Local Address _____

City _____ State _____ Zip _____

Phone ( ) _____ – _____

Please check (√) the term which most accurately identifies your ethnic background.
- ☐ Black American
- ☐ Native American (American Indian)
- ☐ Spanish American (including Mexican American)
- ☐ White (Eastern & Western Europe)
- ☐ A non-U.S. Citizen studying in the U.S.
- ☐ Other (Please specify) _____

2. What is the name of the school you are leaving? _____

3. What is your occupational specialty? _____

4. What is the date of your leaving? _____

5. Have you completed your program of study?
Yes ☐ Go to # 19 No ☐ Go to # 17

6. When will you complete your program? _____

7. What is your current employment status? Please check (√) only one.
- ☐ I am being considered. Go to # 20
- ☐ I am seeking a job. Go to # 28
- ☐ Military. Go to # 28
- ☐ I have obtained a full-time job (35 hours per week or more). Go to # 20
- ☐ I have obtained a part-time job (34 hours per week or less). Go to # 20
- ☐ I am not available for employment. Go to # 27
- ☐ Other (Explain) _____. Go to # 28

8. Is this job in the field for which you were trained? Yes ☐ Go to # 23
No ☐ Go to # 22

9. Is this job in a field related to the one for which you were trained? Yes ☐ Go to # 23
No ☐ Go to # 23

10. What is your job title? _____

11. Describe your job. _____

12. Who is your employer? Firm Name _____ Address _____
City _____ State _____ Zip _____

13. What is your approximate starting salary? $ _____ Go to # 28

14. Please check (√) the reason(s) you are not available for employment.
- ☐ I have become disabled and cannot do this type of work.
- ☐ I have become pregnant, causing me to forego a new career.
- ☐ I am unwilling to move to a new locality to take an available job.
- ☐ I am continuing my education.
- ☐ My marital status changed which caused me to forego a new career.
- ☐ I took the course for personal enrichment, an avocational, or recreational purposes only (not under the G.I. Bill).
- ☐ Other reasons (Please specify) _____

15. THANK YOU for your cooperation.

5. Permanent Address _____

6. City _____ State _____ Zip _____

7. Phone ( ) _____ – _____

9. What is your sex? Male ☐ Female ☐

10. What is your date of birth? _____

11. Are you a veteran? Yes ☐ No ☐

15. Why are you leaving? _____

17. Will you complete your program of study?
Yes ☐ Go to # 18 No ☐ Go to # 19

20. How did you get this job?
- ☐ The school placement service.
- ☐ Through parents or relatives.
- ☐ Through personal friends.
- ☐ Had a job with present employer.
- ☐ The vocational instructor.
- ☐ The school counselor.
- ☐ Job Service.
- ☐ A private employment agency.
- ☐ Advertising.
- ☐ On my own.

SOUTH DAKOTA VOCATIONAL EDUCATION

FOLLOW-UP SURVEY

(Post Secondary)

Your responses to this survey are confidential. Please react to each question or statement that is appropriate to you with the greatest degree of openness. Please check (√) the appropriate box, fill in the desired information, or circle the number which best reflects your answer. When finished please use the accompanying pre-addressed envelope and mail to:

Mr. Malcolm J. Fawley, Director
South Dakota Vocational Education Follow-Up
University of South Dakota/Springfield
Springfield, S.D. 57062

1. My current zip code is: _____. Go to # 2

2. I am currently employed full-time (35 hours or more per week).
   True ☐ Go to # 3
   False ☐ Go to #12

3. This employment is in the field for which I was trained.
   True ☐ Go to # 5
   False ☐ Go to # 4

4. This employment is in a field related to the one for which I was trained.
   True ☐ Go to # 5
   False ☐ Go to # 5

5. My job title is: _____ Go to # 6

6. My duties include _____
   _____
   _____ Go to # 7

7. My employer is:
   Firm Name _____
   Address _____
   City _____ State _____ Zip _____ Go to # 8
   Immediate Supervisor _____

8. My starting average hourly wage was $ _____ Go to # 9

9. My current average hourly wage is $ _____ Go to #10

10. In terms of promotional opportunities, I am advancing in my current employment.
    True ☐ Go to #11
    False ☐ Go to #11

11. I am satisfied with my current employment.
    True ☐ Go to #14
    False ☐ Go to #14

12. I am available for employment.
    True ☐ Go to #14
    False ☐ Go to #13

13. I am not available for employment for the following reason or reasons.
    ☐ I became disabled and cannot do this type of work.
    ☐ Military service.
    ☐ I became pregnant, causing me to forego a new career.
    ☐ I have continued my schooling.
    ☐ My marital status changed, causing me to forego a new career.
    ☐ I was unwilling to move to a new locality to take an available job.
    ☐ I took the course for personal enrichment, an avocational, or recreational purposes only.
    ☐ Other reasons (Explain) _____

14. Please rate on the following scale the degree to which your classroom and laboratory instruction reflected the skills you needed for employment. Circle your answer. One (1) means there was no relation, and seven (7) means there was a very high relation.
    1 2 3 4 5 6 7

(over)

15. Please rate the degree to which your instructors clarified the subject matter of your program. Circle your answer. One (1) means that they did not clarify the subject matter well, and seven (7) means that they did clarify the subject matter well.
    1 2 3 4 5 6 7

16. Please rate your instructor's knowledge of their subject matter area. Circle your answer. One (1) means that they were not very knowledgeable, and seven (7) means that they were highly knowledgeable.
    1 2 3 4 5 6 7

17. Please rate on the following scale the degree to which your instructors showed interest in your progress. Circle your answer. One (1) means they showed no interest in your progress, and seven (7) means they showed an extremely large amount of interest in your progress.
    1 2 3 4 5 6 7

18. Please rate on the following scale the degree to which you were prepared by your school for your current job. Circle only one number per line. One (1) means I was not prepared, and seven (7) means I was highly prepared.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Knowledge . . . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Job Skills | | | | | | | |
| quantity of work . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| quality of work . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Attitude | | | | | | | |
| following instructions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| working with others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| willingness to improve | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Safety . . . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Communications . . . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

19. My comments pertaining to the school, program, and/or classes are as follows: _____

20. Thank you for your cooperation.
    Please mail to: Malcolm J. Fawley, Director
    South Dakota Vocational Education Follow-Up
    University of South Dakota/Springfield
    Springfield, S.D. 57062

SOUTH DAKOTA VOCATIONAL EDUCATION

FOLLOW-UP SURVEY

Employer

Your responses to this survey are confidential. Please react to each question or statement with the greatest degree of openness. When you have completed this survey, please use the pre-addressed envelope and mail to: Malcolm J. Fawley, Director
South Dakota Vocational Education Follow-Up
University of South Dakota/Springfield
Springfield, S.D. 57062

1. Employee's name _____

2. Please rate on the following scale the degree to which the above mentioned employee was prepared to enter the world of work at the time he/she came to work for your company. Circle only one number per line. One (1) means this person was not prepared, and seven (7) means this person was highly prepared.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Knowledge . . . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Job Skills | | | | | | | |
| quantity of work . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| quality of work . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Attitude | | | | | | | |
| following instructions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| working with others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| willingness to improve | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Safety . . . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Communications . . . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. Are you satisfied with this person as an employee? Yes ☐ No ☐

4. Would you hire another person from the same school and program if you could? Yes ☐ No ☐

5. Please comment on the school and/or program from which this person came. _____

_____

_____

_____

_____

_____

_____

_____

6. Thank you for your cooperation! Please mail to:

Malcolm J. Fawley, Director
South Dakota Vocational Education Follow-Up
University of South Dakota/Springfield
Springfield, S.D. 57062